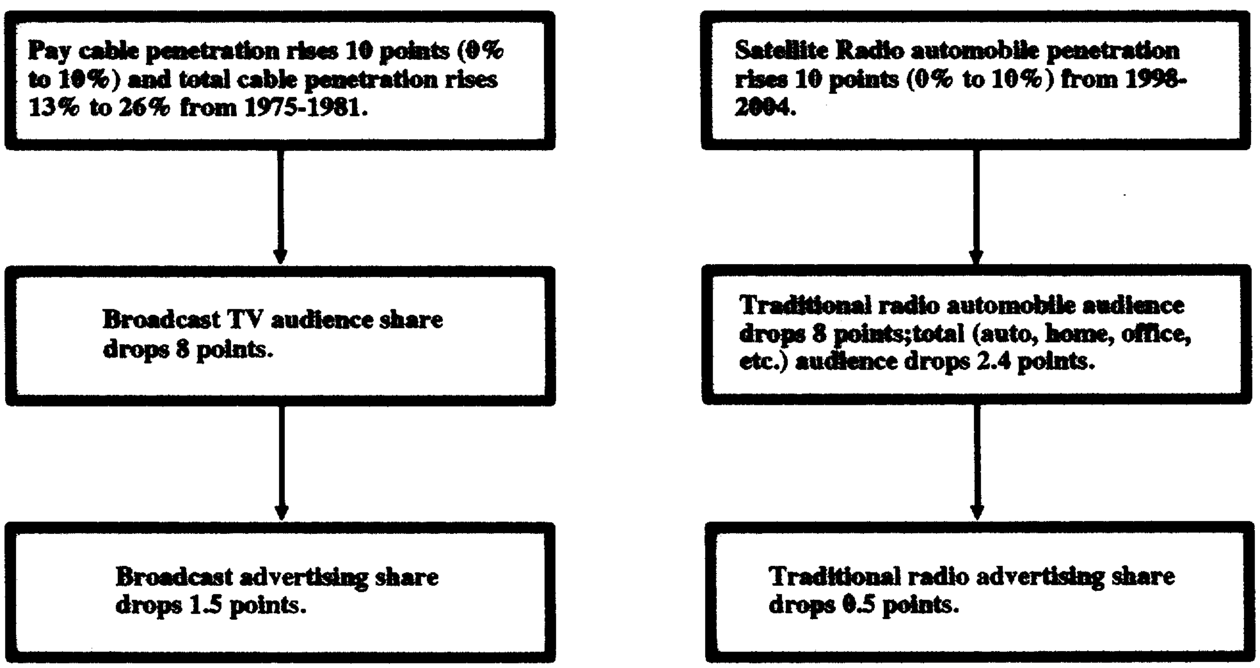
I. **Satellite Radio Will Not Hurt Traditional Radio**

## F. By Analogy with Cable TV Historical Model, Satellite Radio Will Have a Trivial Impact on Traditional Radio

- In the early years of cable television—particularly pay cable TV—broadcasters expressed concern about cable's impact on their own revenues. Broadcasters now question the effect of Satellite Radio—another alternative to traditional broadcasting that, like cable, may be subscription- or advertising-supported.
- Using the worst-case assumption of Satellite Radio penetration of 10% by 2004, and applying the analogous cable TV experience, **traditional radio is projected to lose only 0.5% of its advertising share.**

**TV Historical Experience** | **Satellite Radio Model**




See Appendix A, page 27, for fuller explanation of methodology underlying the above models.

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**I. Satellite Radio Will Not Hurt Traditional Radio**

## G. Even Assuming Worst Possible Impact on Traditional Radio's Advertising, Satellite Radio Will Have a Minimal Impact

- While the Cable TV analogy (section I.F.) provides a good prediction of how Satellite Radio will impact traditional radio, even much less realistic assumptions about the impact on audience loss and revenue loss still show a minimal impact.
- If Satellite Radio were to displace traditional radio audience and advertising on a one-for-one basis, the total impact on traditional radio's advertising revenue would still be only 3.1%.

**Satellite Radio achieves 10% penetration by 2004 (conservatively assumes growth will be as high as pay cable, as compared to 3.2% growth for automobile CD players.)**

↓

**Traditional radio loses 10% of its automobile listening audience (conservatively ignores Satellite Radio gains from non-listeners and assumes traditional radio will not retain any audience.)**

↓

**Traditional radio loses 3.1% of its total audience (10% x 31% automobile listener portion of audience.)**

↓

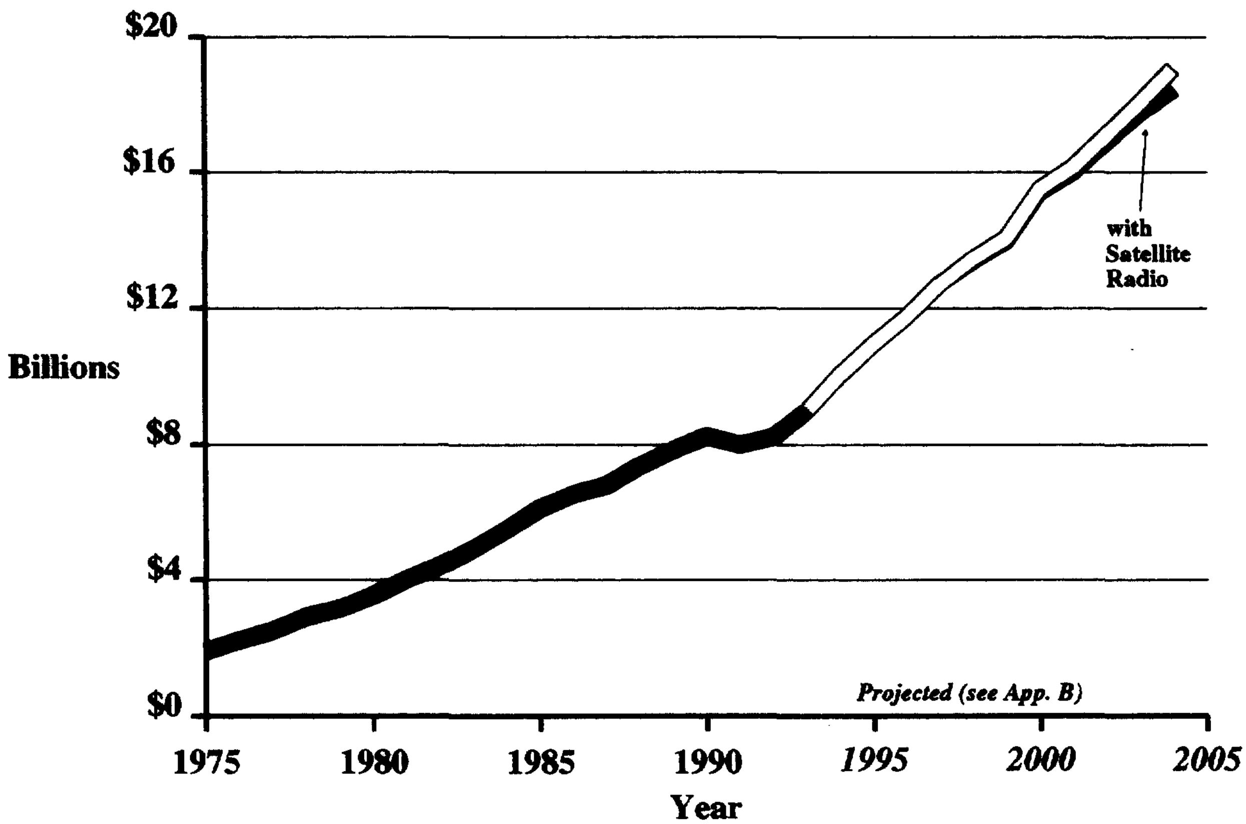
**Traditional radio loses 3.1% of its advertising revenue (conservatively assumes all national and local advertising will be lost one-for-one as audience drops.)**

I. **Satellite Radio Will Not Hurt Traditional Radio**

## H. Based on Worst-Case Assumptions, the Advent of Satellite Radio Will Have a Trivial Impact on Traditional Radio's Revenues

- Satellite Radio will not cause traditional radio to lose revenue; at worst, the effect will be a slight slowing in revenue growth.
- Any effect of Satellite Radio will not begin until after satellite construction and launch, which cannot take place until 1998 at the earliest.

# Radio Station Advertising Revenue

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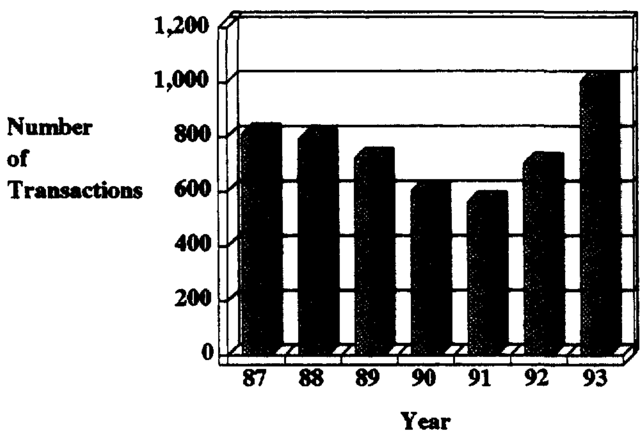
## II. Traditional Radio Broadcasting Is an Economic Powerhouse and Therefore Does Not Need Government Protection

## A. By Any Standard, Traditional Radio Is Healthy and Thriving

Financial experts are betting on the **future** prospects of traditional radio. Any known potential business competitors like satellite radio or cable radio have been discounted in the financial markets. The results are:

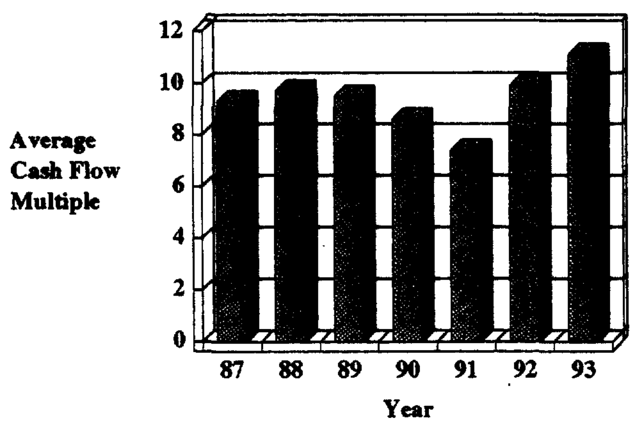
- The number of **station transactions** has been on the rise over the last two years, following the 1990-1991 recession.

**Radio Station Transactions**




- Radio stations traded at prices **11.1 times** their cash flow in 1993, higher than even in the late-1980s.

**Radio Station Cash Flow Multiples**




> We expect local radio advertising to continue to grow faster than local television or local newspaper advertising. Radio is accessible to more advertisers because of its lower unit costs; radio provides a more targeted advertising environment than either newspapers or television; radio reaches 95% of the country each week; and radio is the only electronic medium that travels with its audience.
>
> Arthur Gruen
> Wilkofsky Gruen Associates, (see App. C)

## II. Traditional Radio Broadcasting Is an Economic Powerhouse and Therefore Does Not Need Government Protection

## B1. Critical Economic Indicia Show Overall Robust Health of Traditional Radio

- Radio station cash flow margins* at 26.3 percent is **higher than most other media and well above the average for all media.**

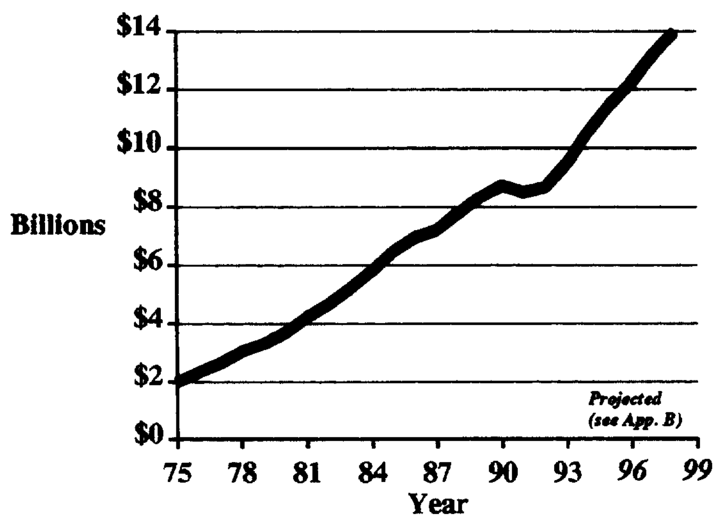
*The industry's profit margin out of every dollar in sales before taxes and depreciation.

**Cash Flow Margins-1993**

| | |
|---|---|
| Cable Systems | 45.0% |
| TV Stations | 30.8% |
| **Radio Stations** | **26.3%** |
| Cable Networks | 22.6% |
| Average Media | 20.7% |
| Newspapers | 19.0% |
| Recorded Music | 17.5% |
| TV Networks | 16.3% |
| Books | 15.6% |
| Business Magazines | 14.4% |
| Consumer Magazines | 14.3% |
| Filmed Entertainment | 13.0% |
| Ad Agencies | 12.1% |

- Total advertising revenue for radio is growing at record rates—**five-fold since 1975.**

**Total Radio Advertising Revenue**



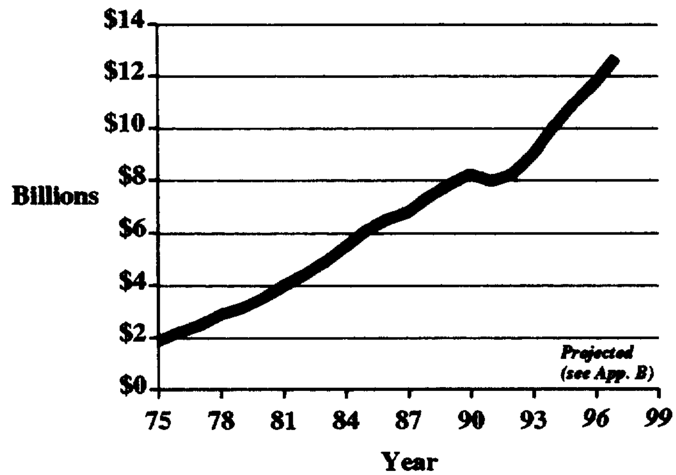

> When you consider that in 1970 radio revenue was just $1.26 billion for the entire year, you begin to realize the significance of nearly matching that figure in a single month.
>
> Gary Fries, President
> Radio Advertising Bureau
> *Radio & Records*, May 7, 1994, p.1.

**II. Traditional Radio Broadcasting Is an Economic Powerhouse and Therefore Does Not Need Government Protection**

# B2. Critical Economic Indicia Show Overall Robust Health of Traditional Radio

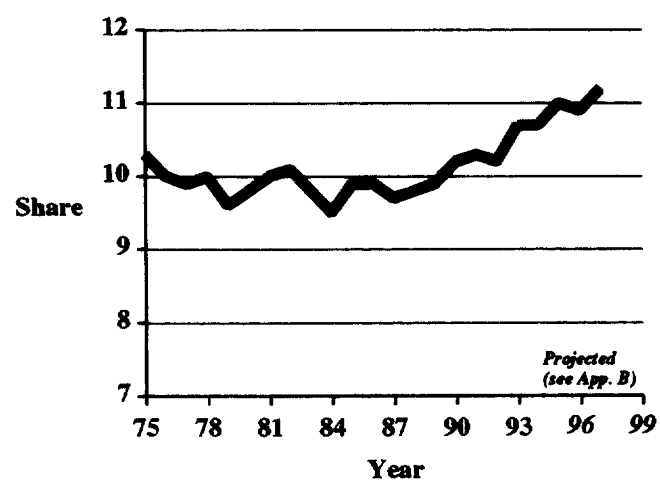
- Radio station advertising revenue rose **9.3 percent** in 1993. In 1994 through May, advertising revenue rose **13 percent**.

**Radio Station Advertising Revenue**




- Radio stations' share of measured-media advertising (TV, radio, newspapers, and magazines) has been increasing in recent years and was at an **all-time high in 1993** despite the rapid growth of cable advertising and barter syndication.

**Radio Stations Share of Advertising**




> Radio's strong showing is quite a feat for a medium that only 20 years ago reported $1.26 billion in ad revenue for an entire year. It is also apparent vindication for an industry long considered television's stepchild—one that, in the 1980s, had to muster an advertising campaign to tout its own advantages over TV and print. Now, RAB crows, no industry-promotion campaign is necessary, or contemplated.
>
> *Wall Street Journal,* July 13, 1994, p. B4

**II. Traditional Radio Broadcasting Is an Economic Powerhouse and Therefore Does Not Need Government Protection**

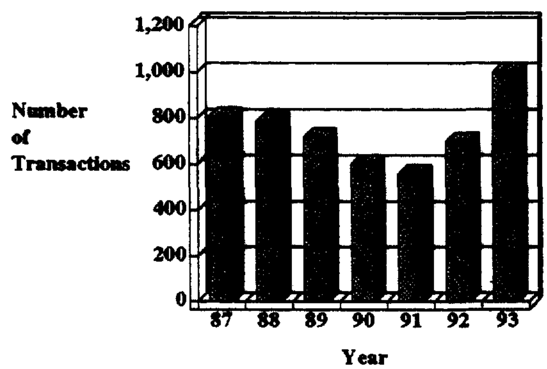
# C. FCC Has Taken Action to Increase Economic Health of Traditional Radio

The relaxation of the duopoly restrictions has benefited owners of traditional radio stations and increased the number of potential buyers for radio stations.

- The relaxation of the rules has **increased the number of potential buyers** for radio stations.
- Owning multiple stations in the same market is more valuable than owning stations in different markets, because of opportunities for cost-sharing and expanded market coverage.
- The result has been **higher cash flow margins** and **higher transactions multiples**.

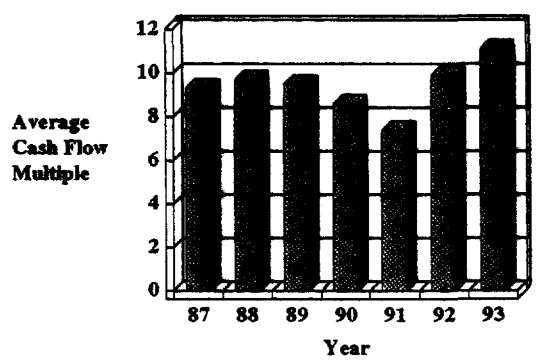
- The number of **station transactions** has been on the rise over the last two years, following the 1990-1991 recession.

**Radio Station Transactions**




- Radio stations traded at prices **11.1 times** their cash flow in 1993, higher than even in the late-1980s.

**Radio Station Cash Flow Multiples**




> The impact [of the new duopoly rules] has been huge—you can cut costs, change marketing. It's a real positive for consumers, because stronger operators have taken over stations and pumped in more money. That's led to more format choice for the consumers, and strong stations can promote better and differentiate themselves.
>
> Garry Boehme, Sr. Vice President for Research,
> Katz Radio Group,
> *The New York Times*, July 25, 1994

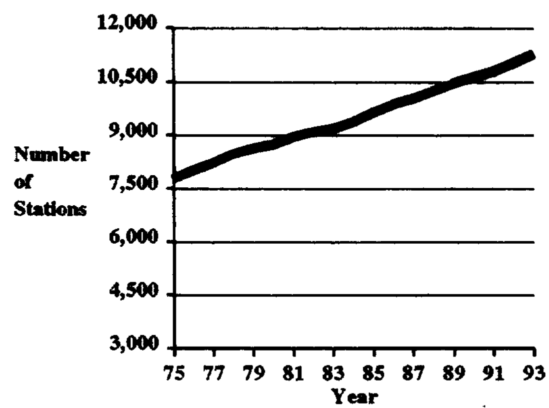
**II. Traditional Radio Broadcasting Is an Economic Powerhouse and Therefore Does Not Need Government Protection**

## D. Situation Today: Competition and Prosperity

- The number of on-air stations has increased by nearly **3,500** since 1975. Over the last four years alone, the number of stations has risen by **1,000. Yet, advertising per station reached an all-time high in 1993, and cash flow margins have improved.** Thus, radio has proven it can absorb new competitors. The proposed new satellite services will have little impact on radio stations.

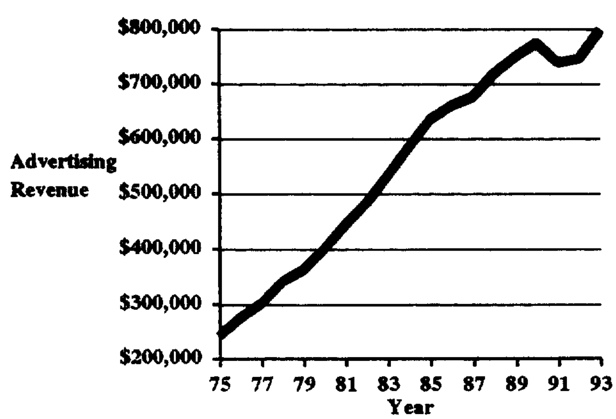
- Even though the **number** of radio stations grew by **45%** since 1975...

**Total Number of Radio Stations**




- ...**advertising revenue per radio station** grew impressively during the same period.

**Advertising Revenue Per Radio Station**




> Radio's recovery started more than a year ago, before the economy was recognized as growing, and it's growing faster than the economy, faster than ad spending in general, faster than most other media.
>
> Gary Fries, President
> Radio Advertising Bureau
> *The New York Times*, July 25, 1994

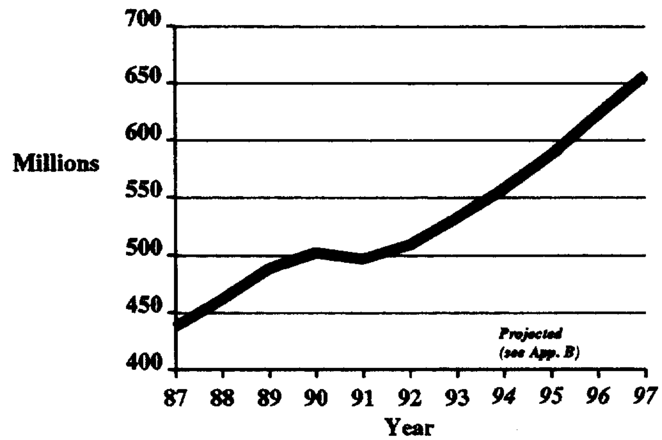
**II. Traditional Radio Broadcasting Is an Economic Powerhouse and Therefore Does Not Need Government Protection**

# E. Situation Today For Small-Market Stations: Competition and Prosperity

The economic health of small-market radio stations is at an all-time high.

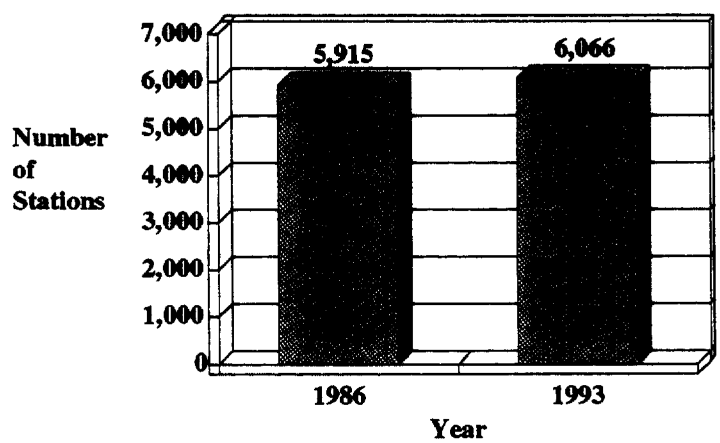
- Revenue for **small-market** radio stations has **risen 22 percent** since 1987 and is projected to continue its climb.

**Small-Market Radio Station Revenues**




- The number of small-market stations has increased 2.5 percent since 1986.

**Number of Small-Market Radio Stations**




> The [Radio Advertising] Bureau conducts a monthly survey of radio advertising in 115 areas around the country, and has found that [the 1994] percentage increases in smaller markets are similar to those [large increases] in bigger markets, a spokeswoman said.
>
> *New York Times*, July 25, 1994

**II. Traditional Radio Broadcasting Is an Economic Powerhouse and Therefore Does Not Need Government Protection**

## F. The Percent of Radio Stations at Any Time That Lose Money Does Not Reflect a Weak Industry That Needs Protection

- There are no solid available data, either for the present or **over time**, for calculating what percentage of radio stations are unprofitable. Even if a profitability-unprofitability snapshot could be taken today, the results would not demonstrate how historically typical the numbers are.

- The best indicator of radio's health is what buyers are willing to pay for radio stations. Trading prices, number of transactions and interest in entering the business—these are the most reliable criteria for measuring an industry's health. Conversely, the number or percent of radio stations losing money can reflect a number of variables which have little to do with the health of the industry, e.g.:
  - higher debt burdens for newly-bought stations;
  - newly licensed stations with start-up advertising revenue levels;
  - accounting procedures (e.g., the owner/manager is paid a very high salary.)

- Also, it is important to recognize that radio broadcasting has attracted historically some sole proprietor-type station owners interested in other things than just station profitability. For example, some owners have been drawn to the business by the lure of community prestige and influence or by the desire to use the station to promote another interest.

**In sum, there is no evidence that the overall health of the industry is in jeopardy. On the contrary, radio remains one of the most profitable industries in the country—station profitability is on the rise, as are advertising and all other indicators. The recent relaxation of the duopoly rules further enhanced the health of radio stations.**

## III. Traditional Radio Has Thrived in the Face of New Technology

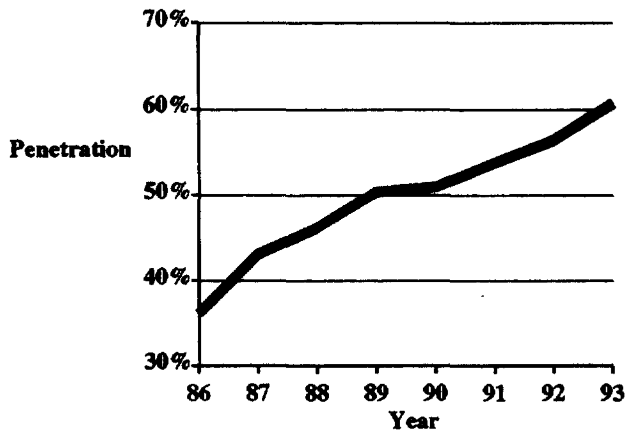
# A1. Economists and Industry Experts Have Long Regarded Radio's Flexibility—its Ability to Accommodate Change—as One of its Distinguishing Economic Assets

**Traditional Radio and Automobile Listenership:** a classic case of radio's adaptability

- **Despite competition from cassette and CD players in cars, radio's automobile audience has grown by nearly 50 percent over the last decade.**
- If cassette and CD players in automobiles did not diminish radio car listening, then the introduction of a similar service like Satellite Radio will not affect radio listening in automobiles either.

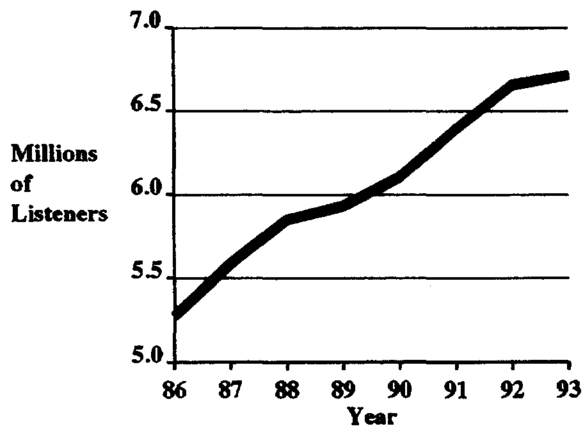
- Despite the growth in cassette players and CD players in cars...

**Car Owners with Cassette or CD Players**




- ...radio listenership in cars continues to grow.

**Car Radio Listenership**




> The three hours a day on average that people listen to radio hasn't changed much over the years, radio executives say, despite a profusion of other entertainment media and gadgets. Radio has held fast in the face not only of television, they say, but portable compact-disk players and videocassette recorders.
>
> *Wall Street Journal*, July 13, 1994

## III. Traditional Radio Has Thrived in the Face of New Technology

# A2. Economists and Industry Experts Have Long Regarded Radio's Flexibility—its Ability to Accommodate Change—as One of its Distinguishing Economic Assets

**Traditional Radio & Program Format Changes:** a classic case of radio's adaptability to computer technology and changing consumer tastes.

- Radio has proven to be highly adaptable in the case of formats. Hundreds of stations switch formats each year to better serve what their station managers estimate to be their listeners' changing tastes.
- Country and adult contemporary were the leading formats in 1993, with news/talk the fastest growing format in 1994—showing how fast things change in radio.
- Over the last five years, news/talk, country, religious, sports, and classic rock have been the main gainers, while adult contemporary, top-40, easy listening, and standard/big band have lost the most stations—showing again how fast things change in radio and also how radio is driven by the need to satisfy consumer choice.
- Radio's ability to adapt to local needs has helped it withstand competition from national services.

**Principal Format Gainers and Losers Over the Last Five Years**

| Format Gainers | # of Stations Gained | Format Losers | # of Stations Lost |
|---|---|---|---|
| News/Talk | 458 | Adult Contemporary | 375 |
| Country | 342 | Top-40 | 340 |
| Religious | 150 | Easy Listening | 158 |
| Sports | 137 | Standard/Big Band | 96 |
| Classic Rock | 136 | Black/Rhythm & Blues | 25 |
| Golden Oldies | 84 | Business News | 15 |
| Album-Oriented Rock | 51 | Classical | 6 |

- In recent months [in 1994], many radio stations have switched to alternative/modern rock—a new format carried by about 75 stations—to reach 18- to 34-year-olds.
- WENZ in Cleveland doubled its advertising revenue after switching to modern rock; KNND in Seattle increased its listenership 150% since switching to modern rock in 1991.

> There are stations changing [to alternative/modern-rock] every week. We've seen a complete upheaval in music that's created huge audiences. It's perfect for radio stations to embrace.
>
> Jeff Pollack, Chairman
> Pollack Media Group
> *Wall Street Journal*, August 22, 1994

## III. Traditional Radio Has Thrived in the Face of New Technology

# A3. Economists and Industry Experts Have Long Regarded Radio's Flexibility—its Ability to Accommodate Change—as One of its Distinguishing Economic Assets

**Traditional Radio & Advertising Changes:** a classic case of radio's adaptability to computer technology and changing advertiser needs.

- For example, computer technology has enabled radio stations to increase advertising revenue through rapid addition, expansion, or modification of commercials, thereby enabling new advertisers to come to market immediately.

> Radio is taking some business from other media, largely because radio broadcasters have become a good deal more sophisticated in how they market their stations.
>
> Tom Moon, Managing Editor
> Radio Business Report
> *The New York Times*, July 25, 1994

- Radio stations also use computer technology to gain new advertisers by accessing computer databases to match the demographics of their listeners with the demographics of businesses.
- For example, a New York radio station can show a New Jersey retail store qualitative Arbitron numbers linking their listeners with the store's customers.

> There's less emphasis today on selling by raw audience numbers and more on saying, 'Here's a profile of your consumers, and here's how that matches the profile of our listeners'.
>
> Tom Moon, Managing Editor
> Radio Business Report
> *The New York Times*, July 25, 1994

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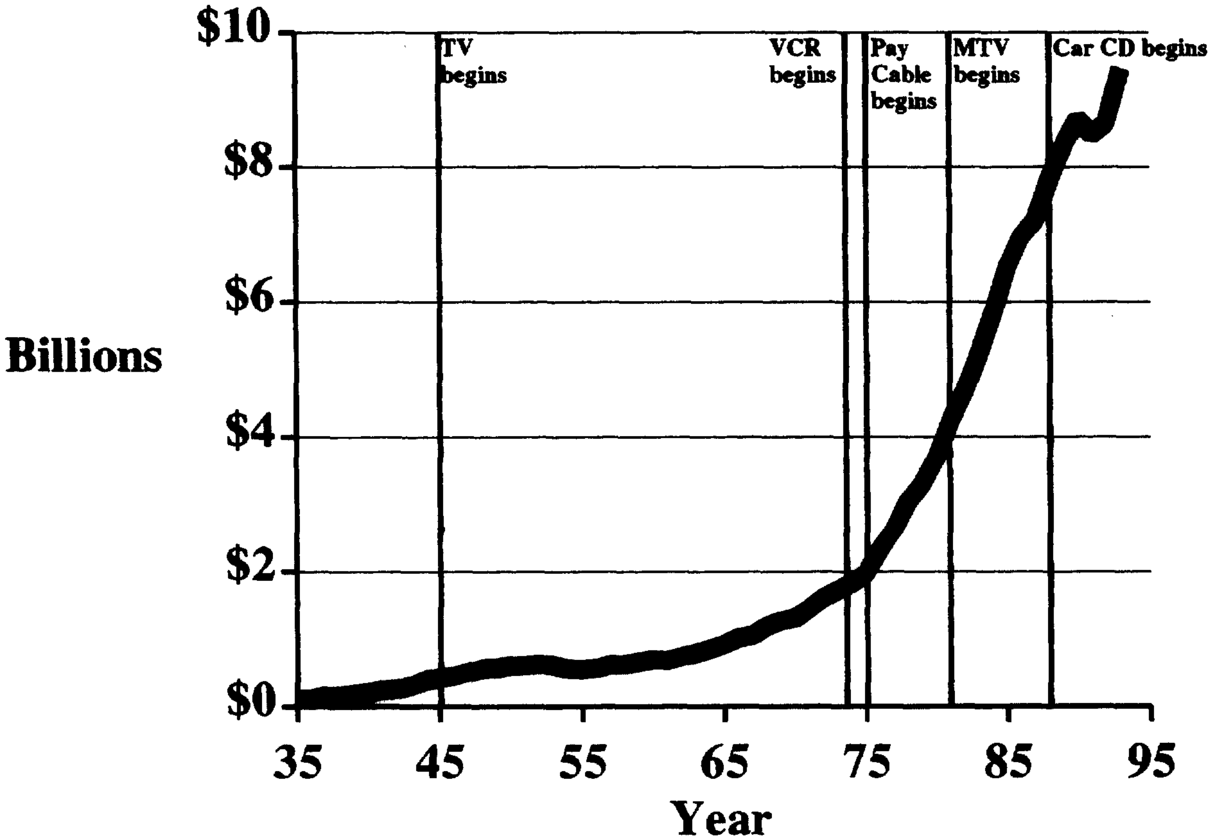
## III. Traditional Radio Has Thrived in the Face of New Technology

## A4. Economists and Industry Experts Have Long Regarded Radio's Flexibility—its Ability to Accommodate Change—as One of its Distinguishing Economic Assets

**Traditional Radio & Technological Changes**: Traditional radio has survived and thrived in the face of new technology:

### Growth of Radio Advertising Revenue vs. Introduction of Competitive New Technologies




Radio has proven to be particularly resilient in adapting to new technologies, and over the last decade, while the television and print industries have been buffeted by technology, radio has thrived. In addition, the relaxation of the duopoly rules has given radio operators greater latitude in improving their efficiency, productivity, and earnings.

Arthur Gruen
Wilkofsky Gruen Associates, (see App. C)

III. **Traditional Radio Has Thrived in the Face of New Technology**

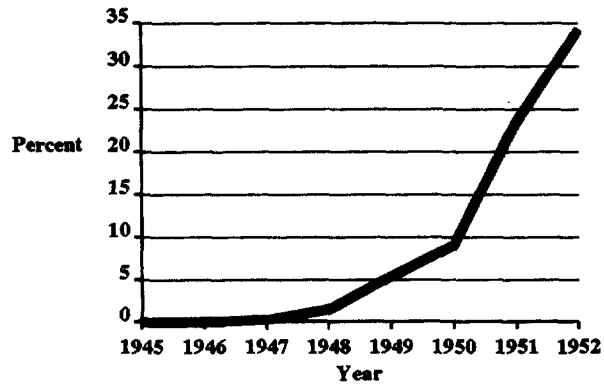
## A5. Economists and Industry Experts Have Long Regarded Radio's Flexibility—its Ability to Accommodate Change—as One of its Distinguishing Economic Assets

Radio has proven it can thrive despite the presence of new competitors—and new competitors of far greater strength than predicted for Satellite Radio.

- Certainly the greatest threat to the health of the radio industry came from the introduction of television.
- Radio had to reinvent itself, transforming from nationally-offered series programming, which migrated to television, to locally-oriented music programming.
- Over the 1945-1952 period, TV household penetration rose from virtually zero to 34.2 percent, a phenomenal growth curve.
- Yet, over that same period, radio station advertising more than doubled.

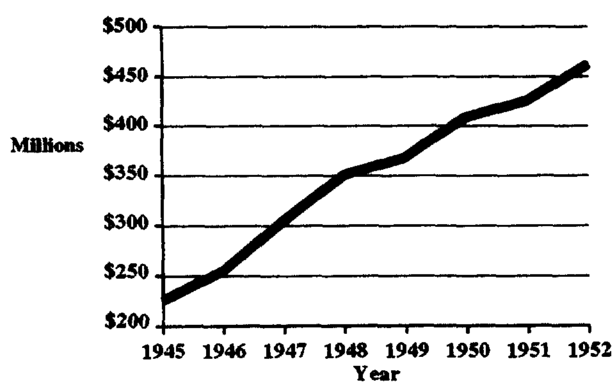
- Even the rapid introduction of television...

**TV Household Penetration**
(1945-1952)




- ...couldn't slow the rapid growth of radio.

**Radio Station Advertising Revenue**
(1945-1952)

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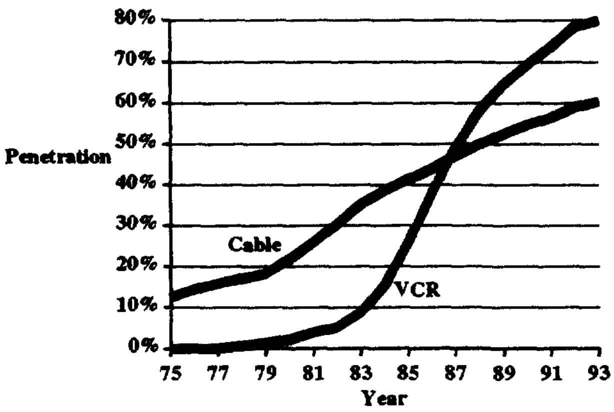
## III. Traditional Radio Has Thrived in the Face of New Technology

# A6. Economists and Industry Experts Have Long Regarded Radio's Flexibility—its Ability to Accommodate Change—as One of its Distinguishing Economic Assets

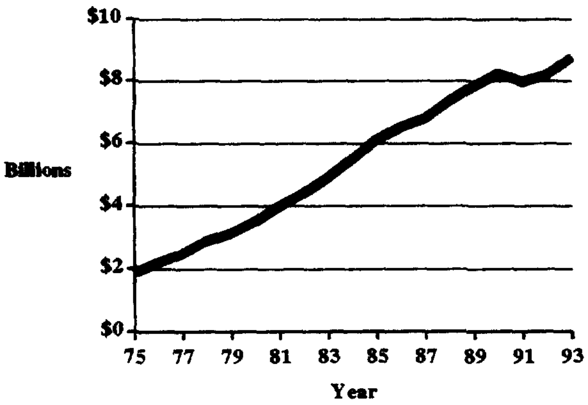
- Similarly, during the 1980s when cable and home video expanded rapidly and competed with radio for listeners time, radio advertising rose.

**Cable and VCR Household Penetration**




- Even the rapid introduction of cable and home video...

**Radio Station Advertising Revenue**




- ...couldn't slow the rapid growth of radio.

- Satellite Radio is not projected to reach 3-10 percent penetration rate until 2004. Radio has expanded at healthy rates in the face of far greater competitive threats.

> Radio's like an alley cat with nine lives—It's a survivor. You can't ever kill it.
>
> Larry Rosin, Vice President,
> Bolton Research, Philadelphia.
> *American Demographics*, May 1994, p. 46.

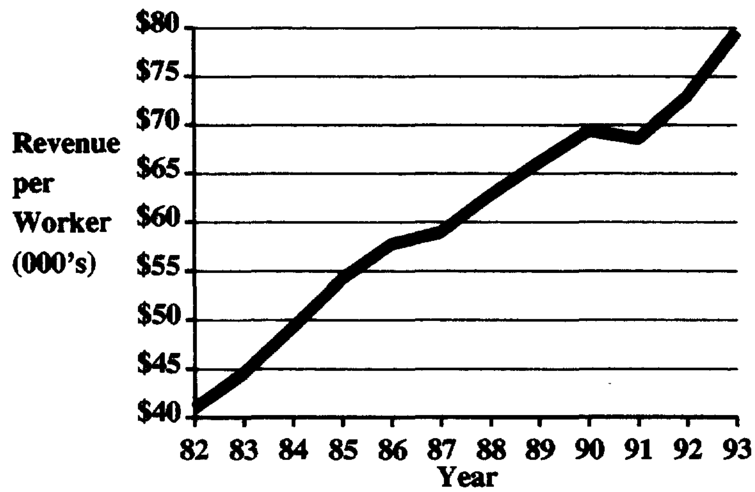
## III. Traditional Radio Has Thrived in the Face of New Technology

# A7. Economists and Industry Experts Have Long Regarded Radio's Flexibility—its Ability to Accommodate Change—as One of its Distinguishing Economic Assets

Productivity growth in radio from technological changes in computers and satellites has led to greater revenues per radio station employee—a classic case of radio's adaptability.

- Advertising revenue per radio station employee has **doubled** since 1982.

**Advertising Revenue per Radio Station Employee**

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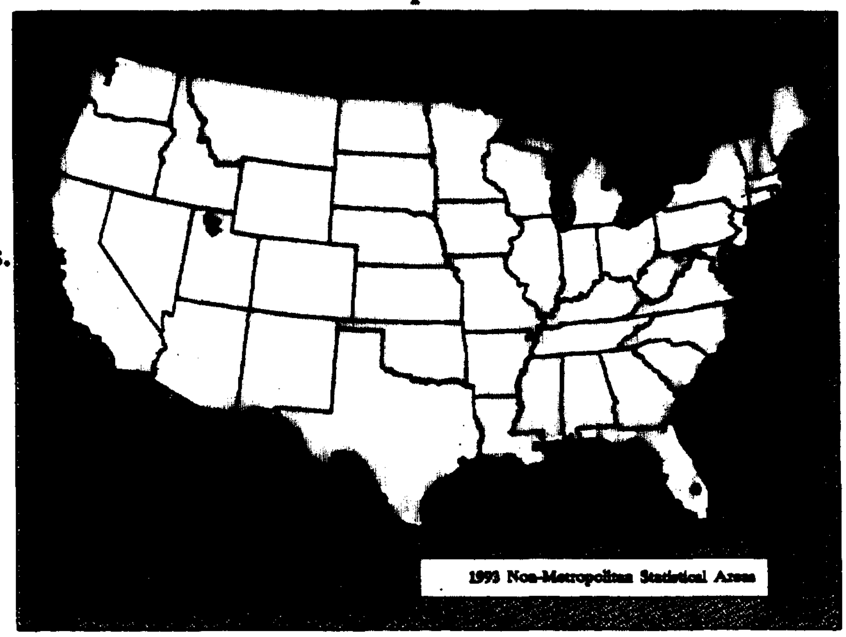
IV. **Satellite Radio Increases Radio Audience—Brings New Listeners, Recaptures Other Listeners**

## A1. Satellite Radio Increases Radio Audience by Promoting Social Diversity Through Radio

Satellite Radio will increase radio audience in rural areas due to limited number of traditional radio stations.

- **1 million** people receive **no FM stations.**
- **1.6 million** people receive **one FM station.**
- **22 million** people receive **five or fewer FM stations.**
- Residents of metropolitan areas **travel** in rural areas.
- 77.2% of the land area in the continental United States are **outside** of the U.S. Government designated Metropolitan Statistical Areas.

**Non-Metropolitan Areas**

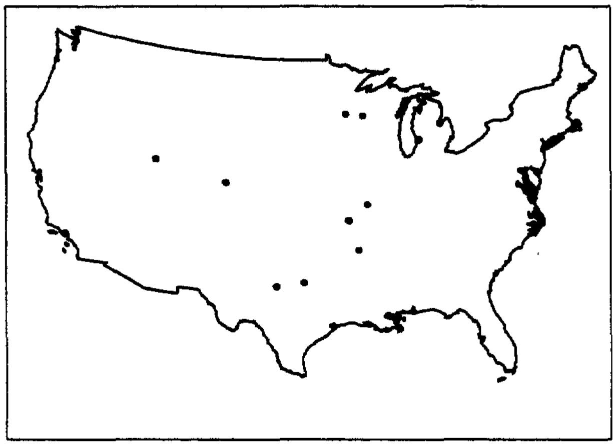


## IV. Satellite Radio Increases Radio Audience—Brings New Listeners, Recaptures Other Listeners

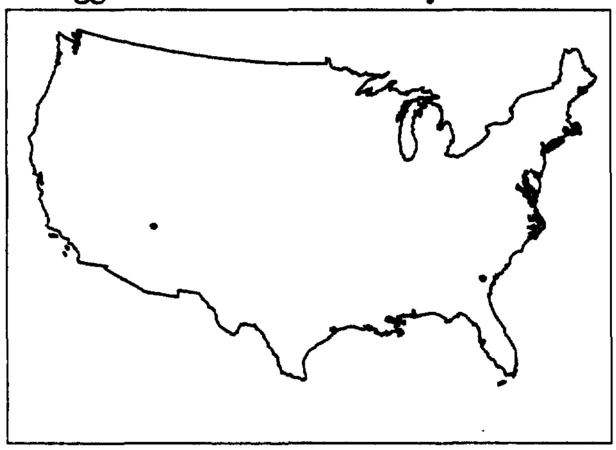
## A2. Satellite Radio Increases Radio Audience by Promoting Social Diversity Through Radio

The four maps below show the extreme scarcity of traditional radio stations with formats devoted to Children's, Reggae, Literature/Drama and Chinese programming. Satellite Radio could offer a national channel devoted to each of these niche formats.

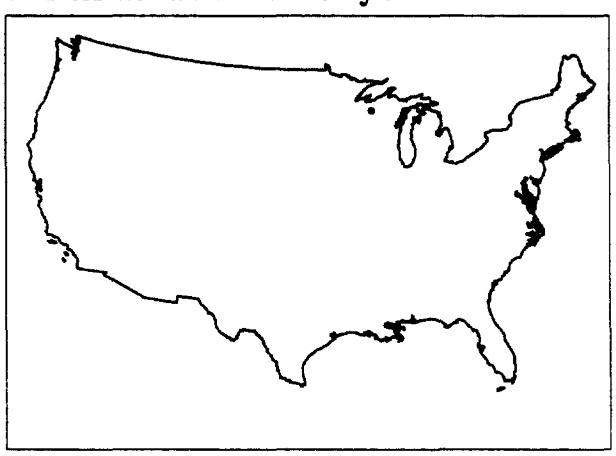
■ **Children's Radio Stations—only 12**



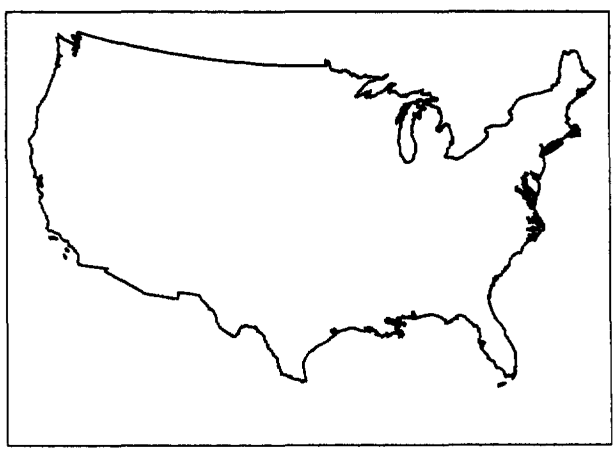
■ **Reggae Radio Stations— only 3**



■ **Literature/Drama—only 1**



■ **Chinese Radio Stations—none**

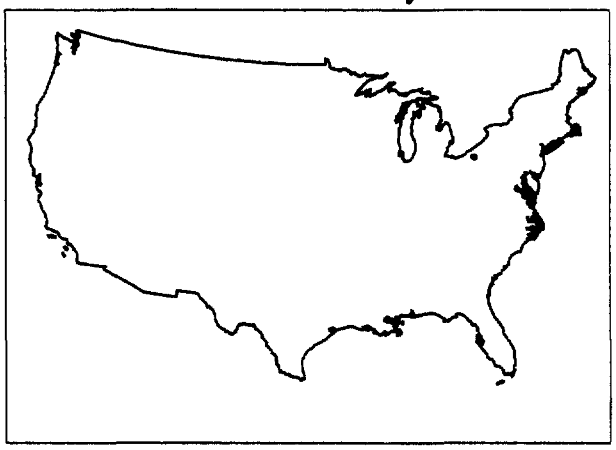


**IV. Satellite Radio Increases Radio Audience—Brings New Listeners, Recaptures Other Listeners**

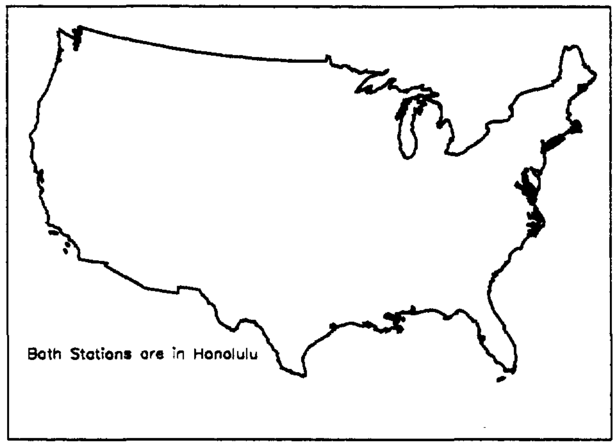
## A3. Satellite Radio Increases Radio Audience by Promoting Social Diversity Through Radio

The four maps below show the extreme scarcity of traditional radio stations with formats devoted to Greek, Japanese, Jewish and Filipino programming. Satellite Radio could offer a national channel devoted to each of these niche formats.

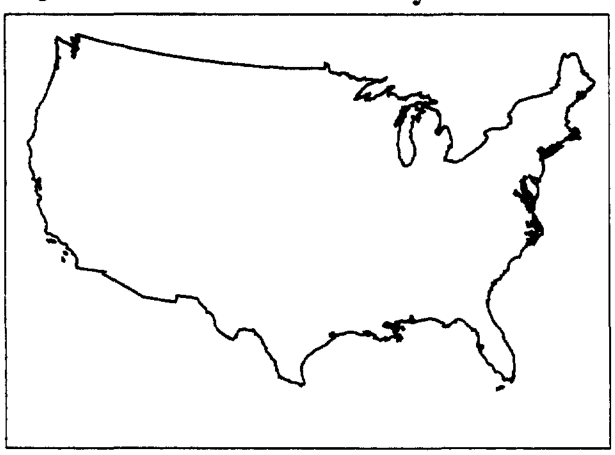
- **Greek Radio Stations—only 5**



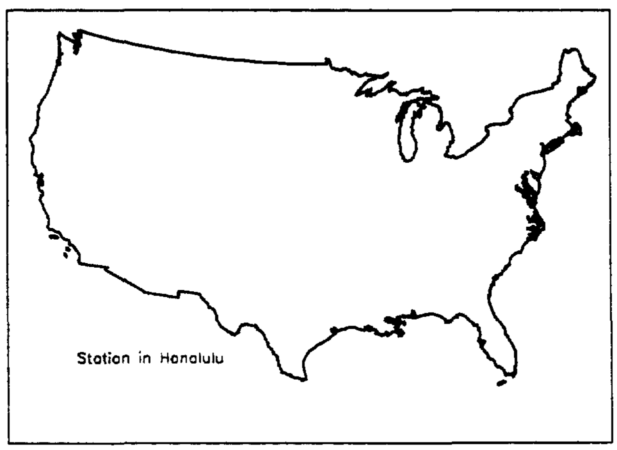
- **Japanese Radio Stations—only 2**




- **Jewish Radio Stations—only 1**



- **Filipino Radio Stations—only 1**

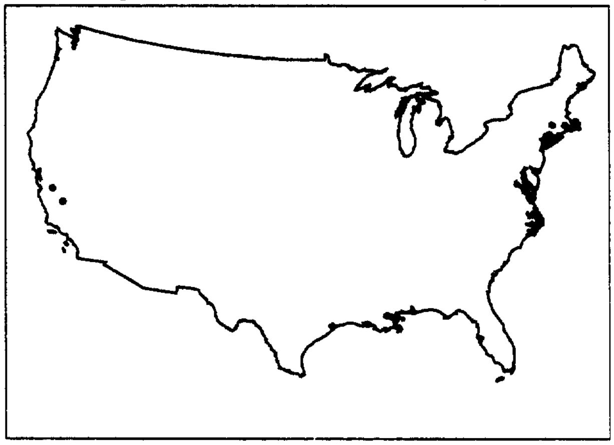


## IV. Satellite Radio Increases Radio Audience—Brings New Listeners, Recaptures Other Listeners

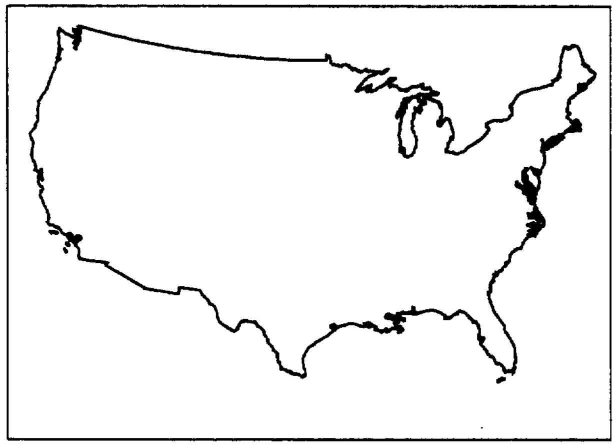
## A4. Satellite Radio Increases Radio Audience by Promoting Social Diversity Through Radio

The four maps below show the extreme scarcity of traditional radio stations with formats devoted to Portuguese, Korean, Polish and Italian programming. Satellite Radio could offer a national channel devoted to each of these niche formats.

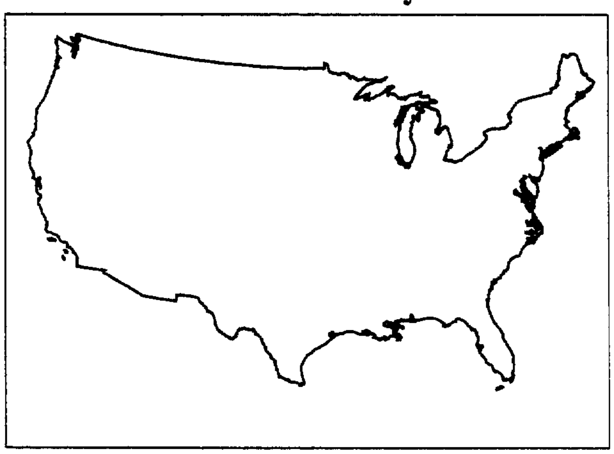
**■ Portuguese Radio Stations— only 8**



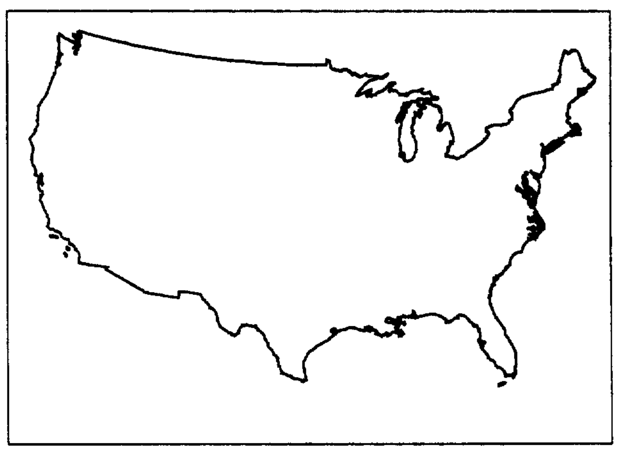
**■ Korean Radio Stations—only 5**



**■ Polish Radio Stations—only 3**



**■ Italian Radio Stations—only 1**

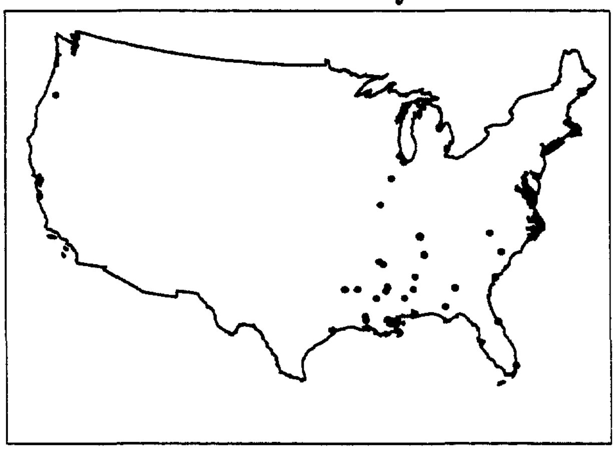


**IV. Satellite Radio Increases Radio Audience—Brings New Listeners, Recaptures Other Listeners**

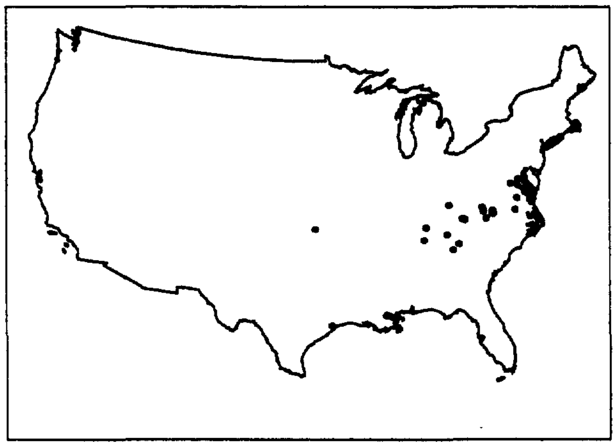
## A5. Satellite Radio Increases Radio Audience by Promoting Social Diversity Through Radio

The four maps below show the extreme scarcity of traditional radio stations with formats devoted to Blues, Bluegrass, Folk and Polka programming. Satellite Radio could offer a national channel devoted to each of these niche formats.

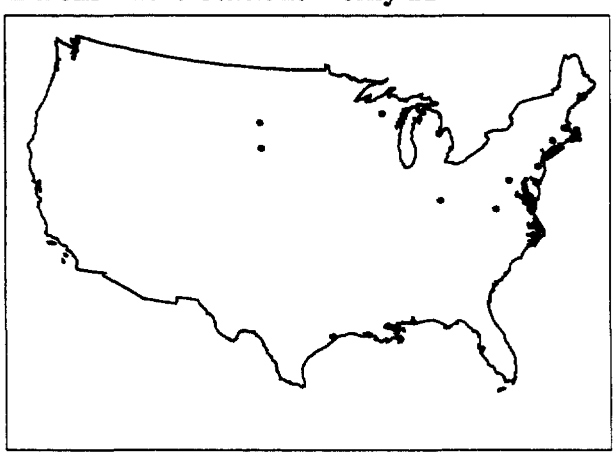
■ **Blues Radio Stations—only 38**



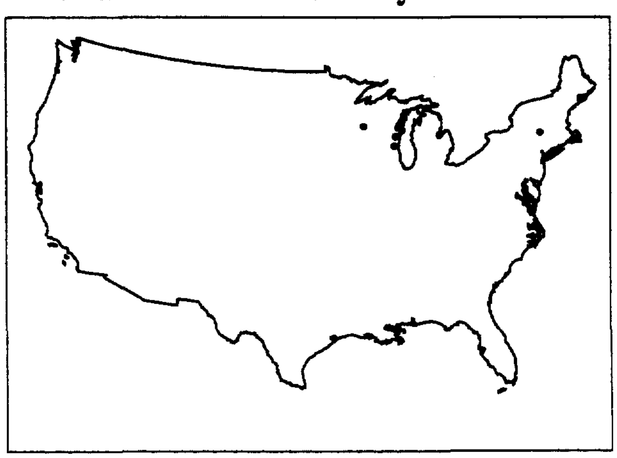
■ **Bluegrass Radio Stations—only 18**



■ **Folk Radio Stations—only 11**



■ **Polka Radio Stations—only 6**



## V. Satellite Radio Is Good For U.S. Economy

## Technology Will Increase Industrial Base

The technology development:

- will strengthen U.S. industry;
- will create export opportunities;
- will increase professional jobs.

The technology development includes advances in satellite and radio design:

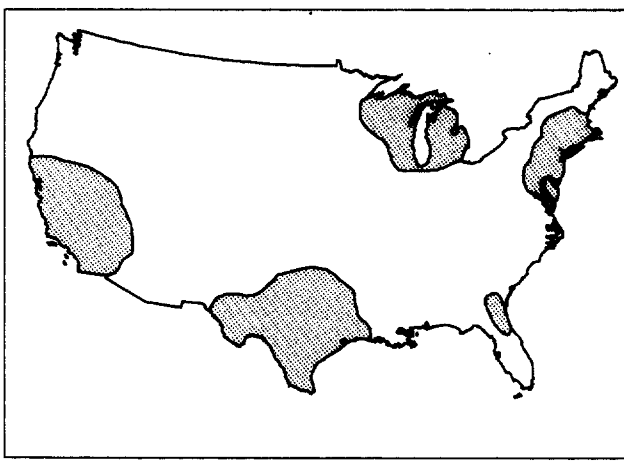
- miniature antennas;
- low noise radio amplifiers;
- multipath mitigation;
- high efficiency chipset processors;
- music compression techniques.

## Manufacturers Will Create Jobs and Corporate Profitability

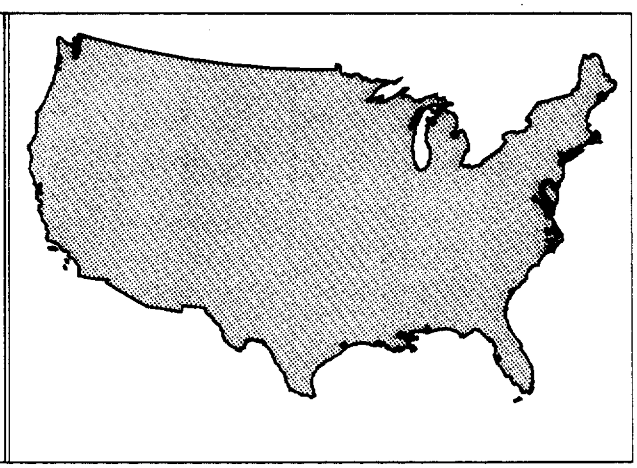
- construction of satellites;
- launch and control of satellites;
- production of radio receivers and their components;
- installation and integration of radio receivers in cars;
- creation of music and talk shows;
- building program origination facilities;
- building satellite uplink and telemetry, tracking and command facilities;
- construction and operation of customer service centers.

## GM, Ford, Chrysler, and Space Systems/Loral are Already Involved.

**Technology Development Jobs**



**Manufacturing Jobs**



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## Appendix A: Methodology For Quantitative Model

### Background

This appendix provides explanatory details of two quantitative models developed to estimate the worst case impact of Satellite Radio on the traditional radio broadcasting industry. The first model draws on analogous experience in the television market with the rapid growth of pay and basic cable service from 1975 to 1981. The second model uses a simple and extremely conservative advertising-diversion model of the impact of an advertiser-supported Satellite Radio service. Using optimistic penetration projections for Satellite Radio, both models find that Satellite Radio would have only trivial impacts on the financial prospects of traditional radio broadcasting.

### Penetration Projections (Section I.E.)

Satellite Radio penetration projections are based on the growth of two analogous industries, CD players and pay cable television. Like Satellite Radio, CD players in automobiles require new equipment and provide commercial-free music. Like Satellite Radio, pay cable television provides nationwide programming for a monthly subscription fee. Penetration of CD players in automobiles grew from 0% to 3.2% of all automobile owners between 1988 and 1994. Pay cable grew from 0% to 10% of television households between 1975 and 1981. Section I.E. shows how rapidly Satellite Radio would have to penetrate original and aftermarket sales starting in 1998 to duplicate the success of CD players in automobiles (Low Growth Scenario) and pay cable TV (High Growth Scenario) by the year 2004. In the pay cable scenario, Satellite Radio would have to achieve factory installation of 30% per year and aftermarket sales of 3.3 million units per year by the year 2004 to reach 10% penetration of the automobile fleet. Both quantitative models use the optimistic, High Growth Scenario projection.

### The Cable TV Historical Model (Section I.F.)

Cable TV's impact on traditional television from 1975 to 1981 provides a useful basis for estimating Satellite Radio's impact on traditional radio. In 1975, the Federal Communications Commission eliminated the "anti-siphoning" regulations applicable to pay cable. The anti-siphoning rules severely restricted movie and sports programming on cable to prevent economic harm to over-the-air television broadcasting. The relaxation of these restrictions fostered the rapid growth of basic and pay cable penetration in the next six years. By 1981, pay cable penetration had risen from 0% to 10%. Over the same period, basic cable penetration rose from 13% to 26%.

Together with the expansion of pay and basic cable programming and the increase in the number of independent stations, this growth in basic and pay cable penetration caused broadcast audience network audience shares to decline. For example, between 1975 and 1981, the major broadcast networks' share of the primetime audience fell 8 percentage points, from 90% to 82%. The drop in audience share, in turn, led to a drop in broadcasting's share of advertising as advertisers moved money from broadcast TV to cable TV. The share of the television advertising pie going to broadcast outlets—broadcast networks and television stations—fell 1.5 percentage points, from 100% in 1975 to 98.5% in 1981.

Thus, even ignoring other important contributing factors, a 10-percentage point increase in pay cable penetration and a 13% point increase in basic cable penetration caused only an 8 percentage point drop in the major networks' primetime audience. Ignoring other possible factors, this caused only a 1.5 percentage point drop in broadcasting's share of the television advertising market.

Equating pay and basic cable TV's penetration success with an assumed 10 percentage point penetration by Satellite Radio provides a realistic estimate of Satellite Radio's impact on traditional radio. By analogy, in the year 2004 Satellite Radio would reduce traditional radio's **automobile** listening audience share by 8 percentage points and its share of the **automobile** radio advertising pie by 1.5 percentage points. Because automobiles account for about 31% of all radio listening, the overall loss in radio's audience and advertising share would be substantially less. Reducing the estimates on a proportionate basis, in the year 2004 Satellite Radio would cause only a 2.4 percentage point loss in traditional radio's **total** listening audience and a 0.5 percentage point loss in its **share** of **total** radio advertising.

This model is conservative in several regards. First, it is based on the optimistic High Growth estimate of Satellite Radio's penetration as compared to the actual 3.2% penetration achieved by CD players in automobiles over a similar time span. Second, it equates a 10% penetration estimate for Satellite Radio with a 10 percentage point penetration for pay cable and a 13 percentage point gain for basic cable. This assumption is conservative, because the cable market was undergoing profound changes in this period. The pay cable TV market grew dramatically from the base of zero, basic cable penetration doubled, and the cable advertising market was going through the initial growing stages typical of most advertising media.

Third, the model ignores important contributing factors. Its audience estimate ignores the important impact that independent TV stations had on the decline in network primetime audience. Its audience and advertising estimates fail to account for the important cable programming improvements made during this period. (While the 13-percentage point rise in basic cable penetration may have increased the reach of UHF stations in this period, this beneficial effect to broadcasters was minimal compared to all the other offsetting factors. Furthermore, cable's effect of increasing broadcast audience was largely confined to independent stations, not network affiliates, it probably had little offsetting effect on the decline in networks' audience share. With regard to audience share, basic cable's effect of increasing audience likely had a minimal effect, because by 1975 TV household penetration was already extremely high.)

Fourth, the cable TV historical model fails to consider that Satellite Radio will be limited to the national advertising market which represents only 18% of traditional radio's total advertising market.

### The Advertising Diversion Model (Sections I.G.-I.H.)

A simple advertising-diversion model also demonstrates that Satellite Radio will have only trivial impacts on traditional radio's audience and advertising revenues. Making extremely conservative assumptions, this model assumes that Satellite Radio achieves a 10% penetration by 2004 and that such penetration causes a 10% reduction of traditional radio's **automobile** audience. This assumption ignores those listeners Satellite Radio adds to the market and assumes that Satellite Radio listeners never listen to traditional radio while in their automobiles. Because the automobile listening audience is only 31% of traditional radio's total listening audience, Satellite Radio could not divert more than 3.1% of traditional radio's audience under this model.

This model then equates a percentage point reduction in listening audience with a percentage point reduction in advertising revenue. Such an approach is extremely conservative, because it assumes that Satellite Radio reduces traditional radio's national and local advertising revenue on a one-for-one basis. As noted above, even if Satellite Radio were entirely supported by advertiser revenues, its direct impact on the advertising would be limited to the national market. (Note, given the enormous size of the national advertising market, it is assumed that an advertiser-supported Satellite Radio does not reduce national advertising prices.) For the 82% of traditional radio advertising that is local